IN THE CLAIMS:

Claims 2-9, 11 and 17-19 were previously cancelled without prejudice. Please now cancel claim 20 without prejudice, add new claim 29 and amend the claims as follows.

1.   (Currently Amended)   A method, comprising:

acquiring, or retrieving from storage, ~~seismic data representative of~~ one or more acceleration wavefield traces;

applying a gain recover to the acceleration wavefield traces ~~seismic data~~;

applying a normal moveout correction to the acceleration wavefield traces ~~seismic data~~;

muting the acceleration wavefield traces ~~seismic data~~;

stacking the acceleration wavefield traces ~~seismic data~~; and

applying a time migration to the acceleration wavefield traces ~~seismic data~~.

2-9.   (Cancelled)

10.   (Currently Amended)   An apparatus, comprising:

an input interface for receiving ~~seismic data representative of~~ one or more acceleration wavefield traces;

a data processor; and

memory comprising program instructions executable by the processor to:

acquire ~~seismic data representative of~~ the acceleration wavefield traces;

apply a gain recover to the acceleration wavefield traces ~~seismic data~~;

apply a normal moveout correction to the acceleration wavefield traces ~~seismic data~~;

mute the acceleration wavefield traces ~~seismic data~~;

stack the acceleration wavefield traces ~~seismic data~~; and

apply a time migration to the acceleration wavefield traces ~~seismic data~~.

11.   (Cancelled)

12.   (Currently Amended)   A seismic surveying arrangement comprising:

a seismic source for emitting seismic energy;

a seismic receiver for acquiring seismic data representative of the acceleration wavefield traces, the seismic receiver being spaced from the seismic source; and

an apparatus as claimed in claim 10 for processing ~~seismic data~~ the acceleration wavefield traces acquired by the receiver.

13.   (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source and the receiver are each disposed at or on the earth's surface.

14.   (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed at or on the earth's surface and the receiver is disposed within a borehole.

15.   (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is located at the base of the water column.

16.   (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is disposed within a borehole.

17-20. (Cancelled)

21.   (Currently Amended)   The method of claim 1, further comprising removing an effect of a signature of the source used to acquire the acceleration wavefield traces~~seismic data~~.

22.   (Currently Amended)   The method of claim 1, further comprising removing coherent noise from the acceleration wavefield traces ~~seismic data~~.

23. (Currently Amended) The method of claim 1, further comprising applying a demultiple algorithm to remove events that involve multiple passes through a water column in which a receiver used to acquire the acceleration wavefield traces~~seismic data~~ is disposed.

24. (Currently Amended) The method of claim 1, further comprising applying a trace equalization algorithm to the acceleration wavefield traces ~~seismic data~~.

25. (Previously Presented) The method of claim 1, further comprising applying a pre-stack deconvolution algorithm to attenuate short period of reverberations.

26. (Previously Presented) The method of claim 1, further comprising applying a post-stack deconvolution algorithm to whiten a signal spectrum.

27. (Currently Amended) The method of claim 26, further comprising applying a time-varying bandpass filter to the acceleration wavefield traces ~~seismic data~~.

28. (Currently Amended) The method of claim 1, further comprising equalizing amplitudes of the stacked acceleration wavefield traces ~~seismic data~~.

29. (New) A method, comprising:

acquiring, or retrieving from storage, seismic data representative of only acceleration wavefield traces;

applying a gain recover to the seismic data;

applying a normal moveout correction to the seismic data;

muting the seismic data;

stacking the seismic data; and

applying a time migration to the acceleration wavefield traces.